AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A picture conversion apparatus that converts an inputted interlaced video signal into a progressive video signal, comprising:

a progressive signal generation circuit that generates a progressive signal by operation based on said inputted interlaced video signal;

a motion calculation circuit that calculates a motion amount in [[the]] a vertical direction of a picture on [[the]] a basis of said progressive signal generated by said progressive signal generation circuit;

a still picture processing circuit that generates a still picture progressive signal by still picture processing from said inputted interlaced video signal;

a moving picture processing circuit that generates a moving picture progressive signal by moving picture processing from said inputted interlaced video signal; and

an output circuit that outputs the still picture progressive signal outputted from said still picture processing circuit when the motion amount in the vertical direction calculated by said motion calculation circuit is smaller than a first value,

wherein said progressive signal generation circuit comprises:

an interlace generation circuit that generates a plurality of interlaced video signals respectively corresponding to a plurality of successive fields on the basis of said inputted interlaced video signal;

a first progressive circuit that generates a first progressive signal on the basis of a first combination of more than one of the plurality of interlaced video signals generated by said interlace generation circuit; and

a second progressive circuit that generates a second progressive signal on the basis of a second combination, which differs from said first combination, of more than one of the plurality of interlaced video signals generated by said interlace generation circuit;

said motion calculation circuit calculating said motion amount of a picture on a basis of said first progressive signal generated by said first progressive generation circuit and said second progressive signal generated by said second progressive generation circuit.

2. (Cancelled)

3. (Currently Amended) The picture conversion apparatus according to claim [[2]] 1, wherein said first value is a value which is not more than the spacing between lines.

4. (Currently Amended) The picture conversion apparatus according to claim [[2]] 1, wherein said motion calculation circuit calculates the motion amount in the vertical direction on the basis of a value smaller than the spacing between lines.

5. (Currently Amended) The picture conversion apparatus according to claim 1, further comprising:

a first pixel generation circuit that generates interpolated pixels between lines by interpolation processing using said first progressive signal generated by said first

progressive generation circuit, to output a first interpolation signal including pixels in

said first progressive signal and the interpolated pixels, and

a second pixel generation circuit that generates interpolated pixels between lines

by interpolation processing using said second progressive signal generated by said second

progressive generation circuit, to output a second interpolation signal including pixels in

said second progressive signal and the interpolated pixels,

said motion calculation circuit calculating said motion amount of the picture on

the basis of said first interpolation signal outputted from said first pixel generation circuit

and said second interpolation signal outputted from said second pixel generation circuit.

6. (Currently Amended) The picture conversion apparatus according to claim [[2]] 1,

wherein said output circuit outputs said moving picture progressive signal as said

progressive video signal when said motion amount is larger than a second value.

7. (Original) The picture conversion apparatus according to claim 6, wherein said output

circuit synthesizes, when said motion amount is between said first value and said second

value, said moving picture progressive signal and said still picture progressive signal at a

ratio based on said motion amount to output the synthesized signal as said progressive

video signal.

8. (Currently Amended) The picture conversion apparatus according to claim [[2]] 1,

wherein said output circuit sets the ratio of said still picture progressive signal to not less

than 0.5 when said motion amount is not more than the spacing between lines.

9. (Currently Amended) The picture conversion apparatus according to claim [[2]] 1, wherein said plurality of interlaced video signals include first to fourth interlaced video signals corresponding to successive first to fourth fields,

said first combination of more than one of the plurality of interlaced video signals include comprises said first to third interlaced video signals, and

said second combination of more than one of the plurality of interlaced video signals include comprises said second to fourth interlaced video signals.

10. (Original) The picture conversion apparatus according to claim 9, wherein

said first progressive signal generated by said first progressive generation circuit is composed of a current line signal and an interpolation line signal,

the current line signal composing said first progressive signal is generated using said second interlaced video signal,

the interpolation line signal composing said first progressive signal is generated using a value obtained by operating said first interlaced video signal and said third interlaced video signal,

said second progressive signal generated by said second progressive generation circuit is composed of a current line signal and an interpolation line signal,

the current line signal composing said second progressive signal is generated using said third interlaced video signal, and

the interpolation line signal composing said second progressive signal is generated using a value obtained by operating said second interlaced video signal and said fourth interlaced video signal.

11. (Original) The picture conversion apparatus according to claim 10, wherein the value

obtained by operating said first interlaced video signal and said third interlaced video

signal is a value obtained by operating corresponding pixels and pixels peripheral thereto

in said first and third interlaced video signals, and

the value obtained by operating said second interlaced video signal and said

fourth interlaced video signal is a value obtained by operating corresponding pixels and

pixels peripheral thereto in said second and fourth interlaced video signals.

12. (Original) The picture conversion apparatus according to claim 10, wherein the value

obtained by operating said first interlaced video signal and said third interlaced video

signal is the average of the values of corresponding pixels in said first and third interlaced

video signals, and

the value obtained by operating said second interlaced video signal and said

fourth interlaced video signal is the average of the values of corresponding pixels in said

second and fourth interlaced video signals.

13. (Currently Amended) The picture conversion apparatus according to claim [[2]] 1,

wherein said motion calculation circuit compares the values of respective object pixels in

said first progressive signal generated by said first progressive generation circuit and said

second progressive signal generated by said second progressive generation circuit and

compares the values of the object pixels and pixels peripheral thereto, to output the

respective results of the comparison as motion amounts.

14. (Original) The picture conversion apparatus according to claim 9, wherein said

motion calculation circuit operates the value of an object pixel in the interpolation line

signal composing said second progressive signal, the value of a pixel, which corresponds to said object pixel, in the current line signal composing said first progressive signal, and the values of pixels in interpolation line signals above and below the pixel in the current line signal, to output the result of the operation as a motion amount, and/or operates the value of an object pixel in the interpolation line signal composing said first progressive signal, the value of a pixel, which corresponds to said object pixel, in the current line signal composing said second progressive signal, and the values of pixels in interpolation line signals above and below the pixel in the current line signal, to output the result of the operation as a motion amount.

15. (Currently Amended) The picture conversion apparatus according to claim [[2]] 1, further comprising:

a pixel generation circuit that generates interpolated pixels between lines by interpolation processing using said first progressive signal generated by said first progressive generation circuit, output a first interpolation signal including pixels in said first progressive signal and the interpolated pixels,

said motion calculation circuit calculating said motion amount in the vertical direction of the picture on the basis of said first interpolation signal outputted from said first pixel generation circuit and said second progressive signal generated by said second progressive generation circuit.

16. (Currently Amended) The picture conversion apparatus according to claim [[2]] 1, further comprising:

a judgment circuit that respectively calculates the averages of the values of object pixels and pixels peripheral thereto in the plurality of interlaced video signals

corresponding to the plurality of fields, to judge whether said still picture progressive signal is adaptive or non-adaptive on the basis of said calculated averages,

said output circuit outputting the moving picture progressive signal as said progressive video signal when the result of the judgment by said judgment circuit is non-adaptive.

17. (Original) The picture conversion apparatus according to claim 16, wherein said judgment circuit respectively calculates the maximums and the minimums of the values of the object pixels and the pixels peripheral thereto in the plurality of interlaced video signals corresponding to said plurality of fields, to judge whether said still picture progressive signal is adaptive or non-adaptive on the basis of said calculated averages, maximums, and minimums.

18. (Original) The picture conversion apparatus according to claim 16, wherein said judgment circuit judges whether said still picture progressive signal is to be non-adaptive when the respective differences between said calculated averages are larger than a predetermined value, and the difference between said maximum and minimum in the same field is smaller than the predetermined value.

19. (Currently Amended) A picture conversion method in which an inputted interlaced video signal is converted into a progressive video signal, comprising the steps of:

generating a progressive signal by operation based on said inputted interlaced video signal;

calculating a motion amount in [[the]] a vertical direction of a picture on [[the]] a basis of said generated progressive signal;

generating a still picture progressive signal by still picture processing from said inputted interlaced video signal;

generating a moving picture progressive signal by moving picture processing from said inputted interlaced video signal; and

outputting said still picture progressive signal when said calculated motion amount in the vertical direction is smaller than a first value,

wherein generating a progressive signal comprises:

generating a plurality of interlaced video signals respectively corresponding to a plurality of successive fields on the basis of said inputted interlaced video signal;

generating a first progressive signal on a basis of a first combination of more than one of said generated plurality of interlaced video signals; and

generating a second progressive signal on a basis of a second combination, which differs from said first combination, of more than one of said plurality of generated interlaced video signals;

said calculating a motion amount comprises calculating said motion amount of a picture on a basis of said generated first progressive signal and said generated second progressive signal.

20. (Cancelled)